

CLAIMS

1. A pot for growing a plant or plants, the pot comprising:
a side wall having an upper edge forming a mouth;
5 a bottom wall continuous with the side wall, the bottom wall and side wall together defining a chamber for containing a growth medium; and
liquid transfer means for transferring liquid between the growth medium and a local environment external to the pot and adjacent the base wall;
10 wherein
the liquid transfer means transfers liquid to and/or from an internal zone in the chamber, the internal zone spaced from the bottom wall.
2. The pot of claim 1 wherein the liquid transfer means comprises one or more liquid transfer conduits.
- 15 3. The pot of claim 2 wherein each liquid transfer conduit extends upwardly from a base aperture in the bottom wall to an internal aperture positioned in the internal zone.
4. The pot of claim 3 wherein the liquid transfer conduit is formed with a water impervious side wall.
- 20 5. The pot of claim 4 wherein the liquid transfer conduit is cylindrical.
6. The pot of claim 4 further including retention means for retaining liquid transferring material in the liquid transfer conduit.
7. The pot of claim 6 wherein the liquid transferring material is one or more of a growth medium, coir dust, bark and polyester.
- 25 8. The pot of claim 6 wherein the liquid transferring material is a solid, liquid-permeable plug.
9. The pot of claim 8 wherein the plug is an expanded plug having an inner end extending laterally beyond the side wall of the liquid transfer conduit.
- 30 10. The pot of claim 6 wherein the retention means is a mesh positioned in the base aperture.
11. The pot of claim 10 wherein the mesh is removably positioned in the

base aperture.

12. The pot of claim 10 wherein the mesh is formed integrally with the liquid transfer conduit.

5 13. The pot of claim 3 wherein each liquid transfer conduit is formed integrally with the pot.

14. The pot of claim 4 wherein the liquid transfer conduit is formed as an upwardly extending slot.

15. The pot of claim 14 further including a material wick positioned in the slot.

10 16. The pot of claim 4 further comprising an internal cap adapted to cover the internal aperture, sufficiently loosely to allow liquid to pass between the cap and an edge of the aperture.

17. The pot of claim 16 wherein the internal cap is substantially planar.

15 18. The pot of claim 16 wherein the cap extends downwardly over an edge of the internal aperture.

19. The pot of either one of claim 17 or 18 wherein the cap is hingedly connected to the liquid transfer conduit.

20 20. The pot of claim 1 wherein the liquid transfer means comprises one or more liquid permeable plugs each inserted through a corresponding base aperture and closely abutting a wall of the aperture.

21. The pot of claim 20 wherein each liquid permeable plug is formed from one or more of concrete, mortar, clay, rubber, polymeric material, wood and polyester.

22. The pot of claim 20 wherein each liquid permeable plug is cylindrical.

25 23. The pot of claim 20 wherein each liquid permeable plug includes a butt section.

24. The pot of claim 23 wherein the butt section flares outwardly.

25. The pot of claim 20 wherein the liquid permeable plug is waisted to provide a seat for an edge of the base aperture.

30 26. The pot of claim 20 wherein a gap between the liquid permeable plug and the base is 500 microns or less.

27. The pot of claim 26 wherein the gap is 300 microns or less.

28. The pot of claim 26 wherein the gap is 200 microns or less.

29. The pot of claim 28 wherein the gap is in the range of 50 to 100 microns.

5 30. The pot of claim 20 wherein each liquid permeable plug is removably fitted in its corresponding aperture.

31. The pot of claim 30 wherein each plug is held in position by wedges.

32. The pot of claim 1 wherein the liquid transfer means comprises a flexible fibrous water-permeable member inserted through one or more apertures in the side wall and/or the base wall, the fibrous member
10 dimensioned to substantially fill the aperture.

33. The pot of claim 32 wherein the fibrous member is a wick.

34. The pot of claim 33 wherein the wick is positioned through an aperture in the side wall, the aperture spaced upwardly from the bottom wall.

15 35. The pot of claim 34 wherein the aperture is positioned 0.5 cm or more above the bottom wall.

36. The pot of claim 34 wherein the wick extends under the bottom wall, and is inserted through a second aperture in the side wall, the second aperture spaced from the bottom wall and from the aperture.

20 37. The pot of claim 36 comprising two or more wicks inserted through corresponding apertures.

38. The pot of claim 32 wherein the fibrous member is formed from one or more of spun bond polyester geotextile, calico, hessian or hemp.

25 39. The pot of claim 2 wherein each liquid transfer conduit is formed as a siphon tube having an outlet aperture formed in the bottom wall, an inlet aperture positioned in the chamber, and an intermediate tube between the inlet aperture and outlet aperture, the intermediate tube extending upwardly of the inlet aperture and adapted to create a siphon effect when a liquid level in the pot rises above the siphon tube.

30 40. The pot of claim 39 wherein the inlet tube is configured as an upwardly curved tube.

41. The pot of claim 39 wherein the siphon tube is embedded in a solid block.

42. The pot of claim 41 wherein the solid block is formed of a polymeric material such as polyethylene.

43. A pot for growing a plant or plants and adapted to provide, in use, transfer of liquid to and/or from an internal zone in the pot, the internal zone
5 spaced from a bottom wall, and a local environment external to the pot and adjacent the base wall, the pot comprising:

a side wall having an upper edge defining a mouth;

a bottom wall continuous with the side wall and together defining the chamber; and

10 one or more conduits extending inwardly from the base wall, each conduit open at both ends and adapted to receive a liquid transferring material.

44. The pot of claim 43 wherein each conduit extends from 2 mm to 80 mm.

15 45. The pot of claim 43 wherein the liquid transferring material is one or more of a liquid permeable plug, a material wick, growth medium, soil, coir dust, bark and polyester.

46. The pot of claim 45 wherein the liquid transferring material is growth medium.

20 47. The pot of claim 46 wherein the conduit is dimensioned to receive the growth medium under the influence of gravity.

48. The pot of claim 47 wherein the conduit is cylindrical.

49. The pot of claim 48 wherein the conduit has a diameter in the range of 5 mm to 50 mm.

25 50. The pot of claim 43 further comprising retention means for retaining the liquid transferring material in position in the conduit.

51. The pot of claim 49 wherein the retention means comprises a mesh.

52. The pot of claim 51 wherein the mesh is formed integrally with the conduit.

30 53. The pot of claim 51 wherein the mesh is removably located in a bottom wall aperture of the pot.

54. The pot of claim 43 further comprising a cap locatable on a

corresponding internal aperture of a conduit, sufficiently loosely fitting to allow liquid to and from the aperture.

55. The pot of claim 54 wherein the cap is substantially planar for positioning over the internal aperture.

5 56. The pot of claim 54 wherein the cap extends downwardly over the internal aperture.

57. A pot for growing one or more plants, the pot adapted to transfer liquid to and/or from an internal zone in a chamber of the pot, the internal zone spaced from a bottom wall of the pot, and a local environment external to the
10 pot adjacent the bottom wall, the pot comprising:

a side wall having an upper edge defining a mouth;

a bottom wall continuous with the side wall and together defining the chamber; and

one or more conduits extending inwardly from the bottom wall and
15 adapted to transfer excess liquid out of the pot, each conduit formed substantially as an inwardly extending slot having a continuous side wall.

58. The pot of claim 57 wherein each conduit has a side with a width in the range of 1 mm – 5 mm and a length in the range of 5 mm – 60 mm.

59. The pot of claim 57 wherein each conduit has a cap.

20 60. The pot of claim 59 wherein the cap is removable from the conduit.

61. The pot of claim 59 wherein the cap is hingedly attached to an edge of an internal aperture of the slot.

62. The pot of claim 59 wherein the cap extends downwardly of at least one free edge of the internal aperture of the slot thereby forming a tortuous
25 pathway for liquid flow.

63. The pot of claim 62 further including a material wick positioned in the slot and also describing a tortuous path.

64. The pot of claim 57 further including a material wick positioned in each conduit.

30 65. A method of managing water content in a pot for growing one or more plants, the method comprising the step of:

providing a transfer arrangement for transferring liquid directly to

and/or from an internal zone of a growth medium inside the pot, the internal zone spaced from a bottom wall of the pot, and a local environment adjacent the bottom wall, the transferred liquid passing through a bottom wall and/or a side wall of the pot.

5 66. The method of claim 65 further including the step of positioning growth medium in an inwardly extending conduit, the conduit having a first opening through the bottom wall and a second opening inside the internal zone, the growth medium in the conduit acting as a liquid transfer material between the internal zone and local environment.

10 67. The method of claim 65 wherein transferring liquid includes the step of positioning a material wick in an inwardly extending conduit.

68. The method of claim 65 wherein transferring liquid includes the step of positioning a material wick through at least one aperture in a side wall of the pot, the aperture spaced from the bottom wall.

15 69. A system for managing liquid levels in a plurality of pots containing plants, the system comprising:

a capillary mat for transferring the liquid; and

two or more pots according to claim 1 positioned on the capillary mat and in hydraulic communication with a liquid in the capillary mat.

20 70. The system of claim 69 wherein the capillary mat comprises a lower impermeable layer, an intermediate capillary layer, and an upper impermeable layer, the upper layer having apertures formed and adapted to receive a corresponding pot to thereby provide the hydraulic communication.

25 71. The system of claim 70 wherein the upper layer is formed by overlaid sections of impermeable material configured to permit liquid flow between the capillary load and an upper surface of the upper layer.

72. The system of claim 69 further including a sprinkler system for delivering liquid to the pots.

30 73. The pot of claim 1 further comprising one or more indicator holes in the side wall, each hole spaced from the bottom wall and adapted to allow liquid to flow outwardly when a water table in the pot reaches the level of the one or more holes.

74. The pot of claim 73 wherein two or more holes are positioned around a perimeter of the pot at substantially the same level.

75. The pot of claim 1 further comprising one or more basal side wall apertures in the wall of the pot, the basal apertures adapted to allow exit of
5 roots from the pot.

76. The pot of claim 1 wherein the bottom wall is planar.